

LESSON 28

Roman Numerals: I, V, X, L, and C

In this lesson and in lesson 30, we will explore the four rules and seven symbols that comprise Roman numerals. You often see these numbers representing the year that a building was constructed or that a movie was made. They also pop up occasionally in unexpected places and events, so we will learn them here. In this lesson we will introduce three of the rules and five of the symbols. A capital “I” represents 1. Capital “V” represents 5, and capital “X” represents 10. To show the number 3, you would write III. To show the number 30, you would write XXX.

Rule 1 You can’t use more than three of the same letters in a row when using I and X.

Rule 2 You can use V only once. There will never be a VVV.

Rule 3 If I and X are to the left of a larger symbol, they are subtracted from that symbol.

Here are the numbers 1 through 39 represented with these three symbols and the three rules.

1	I	11	XI	21	XXI	31	XXXI
2	II	12	XII	22	XXII	32	XXXII
3	III	13	XIII	23	XXIII	33	XXXIII
4	IV	14	XIV	24	XXIV	34	XXXIV
5	V	15	XV	25	XXV	35	XXXV
6	VI	16	XVI	26	XXVI	36	XXXVI
7	VII	17	XVII	27	XXVII	37	XXXVII
8	VIII	18	XVIII	28	XXVIII	38	XXXVIII
9	IX	19	XIX	29	XXIX	39	XXXIX
10	X	20	XX	30	XXX		

Notice that we never use I or X more than three times in a row. Notice as well that V cannot be repeated, and that when I is to the left of a V or an X, it is subtracted. See how you form 3 using the symbol I three times. When you make the number 4, you have to use 5 minus 1, which is what the IV means, because I is to the left of V.

We had to stop at 39 because we need a larger symbol to proceed. We can only use three tens, or XXX, so we need a symbol for 50, and then we can put X to the left of it to get 40.

Roman Numerals - L and C

Now that you are familiar with I, V, and X, there are two more symbols to introduce to you. “L” represents 50 and “C” is the symbol for 100. With these new symbols, and some additions to the same rules, we can write the Roman numerals for all of the numbers from 1 to 399. Notice the modifications to rules 1 and 2.

Rule 1 You can’t use more than three of the same letter in a row when using I, X, or C.

Rule 2 You can use V and L only once. There will never be a VVV or an LL.

Rule 3 If I and X are to the left of a larger symbol, they are subtracted from that symbol.

Here are the larger numbers from 40 through 350, represented with these five symbols and the three rules.

40	XL	100	C
50	L	150	CL
60	LX	200	CC
70	LXX	250	CCL
80	LXXX	300	CCC
90	XC	350	CCCL

Example 1

Show 168 with Roman numerals.

168 is $100 + 50 + 10 + 5 + 3$, which is $C + L + X + V + III$ or CLXVIII.

Example 2

Show 249 with Roman numerals.

249 is $200 + 40 + 5 + 4$, which is $CC + XL + IX$ or CCXLIX.

Example 3

What number is represented by CXCI?

C is 100, XC is 90, and I is 1, so the number is 191.

Example 4

What number is represented by CCCLXXIX?

CCC is 300, L is 50, XX is 20, and IX is 9, so the number is 379.

